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(54) MONOMOLECULAR FILM OF OLIGONUCLEOTIDE

(57) Abstract:

PURPOSE: To provide the monomolecular film useful as functional materials such as DNA sensor, a material for molecular element, etc., by bonding a compound having an oligonucleotide structure through sulfur atom to the surface of a metal substrate.

CONSTITUTION: A compound having an oligonucleotide structure is bonded through sulfur atom to the surface of a metal substrate to give the monomolecular film formed on the surface of the metal substrate. The monomolecular film is preferably obtained by dis-

solving an oligonucleotide of the formula (R is H or a thiol-protecting group; R¹ is H or a 1-3C alkyl; E is a nucleic acid salt base; X is S or O; Y is H or OH; (m) is 1-20; (n) is 8 or more) in a solvent such as ethanol, adding an acid such as dichloroacetic acid to the solution, eliminating the protecting group of thiol, then taking out thiol and immersing a substrate having a heavy metal surface such as Au at 10-50°C for one hour to 3 days.

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